

### **REMARKS**

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 39 and 41-76 are presently active in this case. Claims 1-38 were cancelled by a previous amendment. The present Amendment amends independent Claim 39 without introducing any new matter; and cancels Claim 40 without prejudice or disclaimer.

The outstanding Office Action objected to the Figures because of informalities. Claims 39, 41-45, 47-52, 56-61, 63-64, and 66-75 were rejected under 35 U.S.C. § 102(b) as anticipated by Clark et al. (European Patent No. 1,229,321, hereinafter “Clark”). Claims 40, 46, 53-55, 62, 65, and 76 were rejected under 35 U.S.C. § 103(a) as unpatentable over Clark.

In response to the objection to the drawings, submitted herewith are Letter Submitting Drawing Sheets along with 9 Replacement Sheets for Figs. 1-9 correcting the labels to be in English Language. In addition, Figure 4 is amended to add the labels R,G, B for the colors red, green and blue. This change is supported by the specification as originally filed, for example at p. 18, ll. 16-18. No new matter has been added.

Moreover, independent Claim 39 is amended to recite all the features of dependent Claim 40. Consequently, dependent Claim 40 is cancelled.

In response to the rejections of Claim 40 under 35 U.S.C. § 103(a), the features of Claim 40 now incorporated into independent Claim 39, Applicants respectfully request reconsideration of this rejection and traverse the rejection, as discussed next.

The pending Office Action rejects Applicants’ Claim 40 features by alleging inherency. Although the Office Action admits that Clark does not teach “the mask for which the effect is acting upon the sample,” (Office Action, p. 7, ll. 18-19) this feature is still rejected as allegedly being obvious, and the pending Office Action believes that “[i]t would have been obvious ... to use a mask to effect a condition on the sample because according to



Clark et al., it is known in the art that accelerated techniques to exact an effect on coatings to determine the durability of the sample have been known for years.” (Office Action, p. 7, ll. 19-23.)

Applicants respectfully disagree with such assertion of obviousness, and believe that this feature is not obvious in light of Clark, as next discussed.

The reference Clark is directed to a method for predicting the outdoor durability of coating relative to a set of coatings, where all the coatings have been formed from aqueous coating compositions. (Clark, Abstract.) In Clark’s method, the set of coatings are exposed to the same ambient outdoor conditions for the same time period, and the exposed coatings are subjected to a chemiluminescence test, and the results of the chemiluminescence test are compared with each other. (Clark, Abstract, ll. 8-13, ¶ [0027], Claim 1.) Thereby, the entire sample is subjected to the environmental effect with the ambient outdoor conditions. In Clark’s method, the chemiluminescence of the exposed sample is detected, and is compared to the chemiluminescence of a second, reference sample which has also been exposed to the same outdoor conditions. (Clark, ¶ [0026]).

However, Applicants’ Claim 39 method is different from Clark’s method. Briefly summarizing, Applicants’ method is directed to the detection of a change of a physically measurable property of a sample due to an environmental effect. The method includes the steps of (i) subjecting the sample to the environmental effect for an action time, the environmental effect being made to act on the sample with a known ***position-dependent intensity distribution, which is based on a pattern function***; (ii) subsequently detecting transmission, reflection, or scattering of analysis radiation by the sample as a function of position coordinates of the sample and wavelength of the analysis radiation, so as to determine a response function that describes intensity of the transmitted, reflected, or scattered analysis radiation as a function of the position coordinates of the sample and the



wavelength, and (iii) determining correlation of the known position-dependent intensity distribution of the environmental effect, or of the pattern function on which this is based, with the response function by correlation analysis, the correlation being a measure of the change of the physically measurable property of the sample due to the environmental effect. Moreover, the environmental effect is *made to act on the sample through a mask, which has a specific position-dependent transmission function*, so as to produce the position-dependent intensity distribution as an image of the mask on the sample.

Accordingly, according to Applicants' Claim 39, a sample is exposed to an environmental effect, such as radiation, through a mask having a known pattern function, and the mask is thereby creating *a pattern of unexposed and exposed areas on the same sample*. Therefore, it is possible to perform to analyze reflection or scattering of radiation on the surface of the same sample, as a function of the position coordinates of the sample. Because the sample was only partially exposed by the use of a mask, response functions will reflect the pattern of the mask, because the transmission, reflection, or scattering characteristics of the sample surface is different for exposed and unexposed areas of the same sample. A correlation that is obtained from the same sample is surprisingly very sensitive to changes of physically measurable properties, as shown in Applicants' specification in the examples and is also superior in sensitivity comparing the conventional measurement techniques, such as the one disclosed in Clark, where the overall sample is exposed to ambient outdoor conditions. Please note that the above discussion regarding the features of Applicants' Claim 39 is for explanatory purposes only, and is not intended to limit the scope of the claims in any fashion.

To further corroborate the above discussion, Applicants point out to an example that is given in his specification starting at page 18, ll. 10-22. A magenta film of a sample was exposed to artificial sunlight through a grating film as a mask *for merely 10 minutes*. A



one-dimensional Fourier analysis used as a correlation analysis of the scanned image of the exposed film and the unexposed film of the same sample yielded very large signal peaks in the green channel, and noticeable signal peaks in the blue and red channel, thereby indicating the decomposition of the magenta dye that can easily be measured, as shown in Applicants' Fig. 4. However, as shown in a comparative example from page 17, l.30, to p. 18, l. 6, of the prior art, and as discussed in Clark, the outdoor exposure time of the prior art methods is substantially higher, for example *up to 12 weeks*. (Clark, Tables 1.2, and 2.2.)

Therefore, the superior measurement results that are provided by Applicants' method of Claim 39 are surprising, because they lead to a substantial improvement of the sensitivity. Such examples are strong evidence of non-obviousness. M.P.E.P. § 716.02(a). In addition, Clark clearly fails to teach or even suggest anything related to the use of a mask. The passage used by the pending Office Action to justify the obviousness-type rejection even provide further evidence for the non-obviousness of Applicants' Claim 39. Clark teaches away from the use of a mask, because he explains that in order to accelerate the aging of an exposed sample, and to reduce the testing times, artificial conditions such as exposure to shorter wavelengths, higher energy or higher intensity than normal sunlight can be employed, while the mask does not change such parameters. (Clark, ¶ [0003].)

Because the results are surprising and unexpected, as clearly documented in Applicants' specification, it is respectfully submitted that Applicants' Claim 39 is *not* obvious in light of the teachings of Clark. In this respect, the Monarch case provides further common law support for the un-obviousness of Applicants' Claim 39. Monarch Knitting Machinery v. Sulzer Morat GmbH, 45 USPQ2d 1977 (Fed.Cir.1998). In this case was held that the patented knitting machine needles, having a modified stem section of the needle, allowed to increase the manufacturing speed by 40%. Id. at 1984. The court held that such feature together with the improvement of the knitting process supports the inference of



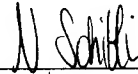
unexpected results. Id. Therefore, a trier of fact could conclude that the claiming knitting needle was not obvious over the prior art. Id.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 39, and 41-76 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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